In The Claims

Please amend the claims as follows:

1. (Currently amended) A failsafe apparatus for attaching a prosthetic limb to the bone of a patient, wherein a force may be applied to the limb urging the limb toward ~~bending or~~ at least one of tilting and rotational articulation, the failsafe apparatus comprising:

a proximal component to mount to a bone implant ;

a distal component to mount to a prosthetic limb ;

a coupling body coupling the proximal and distal components moveably with respect to each other in at least one of a ~~bending or~~ tilting and an axial rotational articulation, said coupling body including

a mechanism for holding said proximal and distal components in relation to each other so that the components can be engaged and can be disengaged, wherein when the components are engaged, one component is in a fixed relation to the other, preventing said at least one of tilting and axial rotation, and wherein when the components are disengaged, said at least one of tilting and axial rotation is allowed, said coupling body including

a resilient biasing ~~mechanism~~ means for applying a ~~predetermined~~ biasing force holding one of the components ~~in a fixed relationship to each~~ engaged with the other component for normal use of the prosthetic limb~~,~~ subject to an applied force less than a predetermined threshold safe level, the effect of said biasing force being opposed by any said force applied to the limb urging the limb toward said at least one ~~bending or~~ of tilting and rotational articulation, and only when said force applied to the limb exceeds a ~~predetermined~~ said threshold safe level and thereby becomes sufficient to overcome the effect of the biasing force, the resilient biasing ~~mechanism~~ means allows the components automatically to become disengaged and thereby to move in said at least one ~~bending or~~ of tilting and axial rotational articulation, thereby providing failsafe protection of the limb from excessive force applied to the limb.

2. (Original) An apparatus as claimed in Claim 1, wherein the apparatus is incorporated into the bone implant component or the prosthetic limb , being in part or wholly, integrally formed or assembled with the bone implant or the limb prosthesis.

3. (Currently amended) An apparatus as claimed in Claim 1, wherein the ~~coupling body has~~ mechanism includes a clutch-like mechanism to rotationally couple the prosthetic limb to the bone implant in use but which automatically disengages, rotationally decoupling the prosthetic limb from the bone implant, when torque applied to the prosthetic limb exceeds a predetermined threshold.

4. (Previously presented) An apparatus as claimed in Claim 3, wherein the apparatus has a resilient biasing means whereby the clutch-like mechanism is resiliently biased to the rotationally coupled state and whereof the biasing force applied to the clutch-like mechanism by the resilient biasing means in use determines the threshold level of torque on the prosthetic limb that will cause disengagement of the clutch-like mechanism.

5. (Original) An apparatus as claimed in Claim 3, wherein the apparatus has adjustment means whereby the threshold level of torque on the prosthetic limb that will cause disengagement of the clutch-like mechanism may be increased or decreased.

6. (Previously presented) An apparatus as claimed in Claim 5, wherein the apparatus has a resilient biasing means whereby the clutch-like mechanism is resiliently biased to the rotationally coupled state and whereof the biasing force applied to the clutch-like mechanism by the resilient biasing means in use determines the threshold level of torque on the prosthetic limb that will cause disengagement of the clutch-like mechanism, wherein the adjustment means comprises a screw adjustment means that is screw-threadedly adjustable axially toward or away from the clutch-like mechanism.

7. (Original) An apparatus as claimed in Claim 3, wherein the clutch-like mechanism has opposing sets of co-operating clutch teeth whereof the teeth are substantially symmetrical in profile whereby the clutch-like mechanism may be disengaged in either rotational direction of torque, clock-wise or anti-clockwise, applied to the prosthetic limb.

8. (Original) An apparatus as claimed in Claim 3, wherein the clutch-like mechanism is on the proximal component but is configured to be located external to the patient's skin in use so that there will be no tearing of the patient's skin when the clutch-like mechanism disengages.

9. (Previously presented) An apparatus as claimed in Claim 1, wherein the coupling body has an automatically disengageable connector that couples together the proximal and distal components so that one is in a fixed angle relation to the other in normal use, but with freedom to articulate away from the fixed angle relation when, in use, a bending force is applied to the prosthetic limb only when the force exceeds a threshold level.

10. (Previously presented) An apparatus as claimed in Claim 9, wherein the apparatus with disengageable connector has a resilient biasing means whereby the disengageable connector is resiliently biased to the coupled state and whereof the biasing force applied to the disengageable connector by the resilient biasing means in use determines the threshold level of bending force on the prosthetic limb that will cause disengagement of the disengageable connector.

11. (Original) An apparatus as claimed in Claim 10, wherein the disengageable connector comprises a pin mounted to one of the proximal and distal components and co-operating with a socket in the other of the proximal and distal components.

12. (Original) An apparatus as claimed in Claim 11, wherein the pin is mounted to be movable back and forth axially of the component to which it is mounted and is biased forwardly.

13. (Original) An apparatus as claimed in Claim 11, wherein the pin has a pointed or domed tip and the socket is of a corresponding concave shape whereby a bending force applied to the prosthetic limb in use will cause the tip of the pin to ride outwardly up the socket wall.

14. (Previously presented) An apparatus as claimed in Claim 13, wherein the shape of the tip is domed or substantially conical to facilitate disengagement of the disengageable connector from whichever radial orientation the bending force is applied.

15. (Original) An apparatus as claimed in Claim 9, wherein the disengageable connector is configured to allow gyrating articulation or universal articulation, substantially in the manner of a ball joint, when it disengages.

16. (Original) An apparatus as claimed in Claim 9, wherein the disengageable connector comprises a T-shaped formation at the end of one or both of the proximal and distal components that are adjacent each other, the head of the or each T-shaped formation being curved/ arcuate to facilitate tilting of one component relative to the other.

17. (Original) An apparatus as claimed in Claim 16, wherein the T-shaped formations are accommodated in the coupling body, or a further coupling body, to tilt within the coupling body.

18. (Original) An apparatus as claimed in Claim 17, wherein the coupling body has slots therethrough, through each of which a respective end of a head of a T-shaped formation extends and whereby the end may protrude to a greater or lesser extent as the component tilts, whereby the coupling body provides a captive articulated joint with a restricted degree of tilting freedom of movement.

19. (Original) An apparatus as claimed in Claim 17, wherein one T-shaped formation is oriented in the coupling body with its head substantially orthogonal to the head of the other, whereby through tilting of each relative to the other an approximately universal or gyrating articulation may be achieved.

20. (Previously presented) An apparatus as claimed in Claim 1, wherein one of the components additionally includes a coupling part subject to tensile force and having a shear pin means whereby the apparatus will uncouple at the coupling part through shearing of the shear pin means if an excess tensile distracting force is applied to it.

21. (Original) An apparatus as claimed in Claim 20, wherein the coupling part is formed at or in the proximal component and the shear pin is demountable or retractable whereby the apparatus and prosthesis may be demounted by the user.

22. (Currently amended) A failsafe apparatus for attaching a prosthetic limb to the bone of a patient, wherein a bending and/or torsional force may be applied to the limb urging the limb toward a tilting and/or rotational articulation, the apparatus to failsafe if excess force is applied to the limb, ~~the failsafe apparatus~~ comprising:

a proximal component to mount to a bone implant;

a distal component to mount to a prosthetic limb; and

a coupling body coupling together the proximal and distal components with freedom to articulate when, in use, a said bending and/or torsional force is applied to the prosthetic limb only when the force exceeds a predetermined threshold safe level whereby the force is accommodated by articulation within the ~~attachment~~ apparatus, wherein the coupling body has an automatically disengageable connector that applies a biasing force to hold the proximal and distal components in engagement and thereby couples together the proximal and distal components so that one is in a fixed angle relation to the other in normal use, the effect of the biasing force being opposed by any applied bending force, thereby allowing the proximal and distal components to disengage ~~but~~ with freedom to articulate away from the fixed angle relation when, in use, a bending force is applied to the prosthetic limb only when the applied bending force exceeds the predetermined threshold level.

23. (Currently amended) A failsafe apparatus for attaching a prosthetic limb to the bone of a patient to failsafe if excess force is applied to the limb, the failsafe apparatus comprising:

a proximal component to mount to a bone implant ;

a distal component to mount to a prosthetic limb ; and

a coupling body coupling together the proximal and distal components with freedom to articulate when, in use, a bending and/ or torsional force is applied to the prosthetic limb only when the force exceeds a predetermined threshold safe level whereby the force is accommodated by articulation within the attachment apparatus, and wherein the coupling body has a clutch-like mechanism with a proximal component face and a cooperating opposing distal component face, which faces are held in engagement to rotationally couple the faces while one of the faces is prevented from rotation, holding the prosthetic limb ~~to~~ and the bone implant in fixed rotational relation in use but which automatically disengages, rotationally decoupling the faces and thereby decoupling the prosthetic limb from the bone implant, when torque applied to the prosthetic limb exceeds a predetermined threshold and wherein the apparatus has adjustment means whereby the threshold level of torque on the prosthetic limb that will cause disengagement of the clutch-like mechanism may be increased or decreased.

24. (Currently amended) A failsafe apparatus for attaching a prosthetic limb to the bone of a patient to failsafe if excess force is applied to the limb, the failsafe apparatus comprising:

a proximal component to mount to a bone implant ;

a distal component to mount to a prosthetic limb ;

a coupling body coupling together the proximal and distal components with freedom to articulate when, in use, at least one of a bending and torsional force is applied to the prosthetic limb only when the force exceeds a predetermined threshold safe level whereby the force is accommodated by at least one of ~~bending~~ tilting and rotational articulation within the attachment apparatus, the apparatus having screw adjustment ~~means~~ whereby the threshold safe level of force on the prosthetic limb that will cause said at least one of ~~bending~~ tilting and rotational articulation within the attachment apparatus may be increased or decreased.

25. (Currently amended) A failsafe apparatus for attaching a prosthetic limb to the bone of a patient to failsafe if excess force is applied to the limb, the failsafe apparatus comprising:

a proximal component to mount to a bone implant ;

a distal component to mount to a prosthetic limb ;

a coupling body coupling together the proximal and distal components; and

resilient biasing means whereby the proximal and distal components are biased in a fixed configuration in which the proximal and distal components are in a fixed angle and rotational relation to the one another, the proximal and distal components having freedom to articulate from the fixed configuration when, in use, at least one of a bending and or torsional force is applied to the prosthetic limb only when the force exceeds a predetermined threshold safe level whereby the force is accommodated by at least one of bending and rotational articulation within the attachment apparatus, and wherein the biasing force applied by the resilient biasing means in use determines the threshold safe level of force on the prosthetic limb that will cause said at least one of bending and rotational articulation within the attachment apparatus, the apparatus having ~~adjustment~~ means for adjusting the biasing force and hence adjusting the threshold safe level of force on the prosthetic limb that will cause said at least one of bending and rotational articulation within the attachment apparatus.

26. (Currently amended) A failsafe apparatus as described in claim 1, wherein the resilient biasing ~~mechanism~~ means includes means for applying ~~at least two of said predetermined biasing forces, whereby~~ a first ~~of the~~ biasing forces which biases the proximal and distal components in a fixed angle relation to one another and means for applying a second biasing force which biases the components in a fixed rotational relation. .

27. (Currently amended) A failsafe apparatus for attaching a prosthetic limb to the bone of a patient, wherein a force may be applied to the limb urging the limb toward bending or rotational articulation, the failsafe apparatus comprising:

a proximal component to mount to a bone implant ;

a distal component to mount to a prosthetic limb ;

a coupling body coupling the proximal and distal components moveably with respect to each other in bending and axial rotational articulation around an axis of the limb, said coupling body including

a resilient biasing ~~mechanism~~ means for applying a predetermined biasing force holding the components in a fixed relationship to each other for normal use of the prosthetic limb, the effect of said biasing force being opposed by any said force applied to the limb urging the limb toward said at least one bending or rotational articulation, and only when said force applied to the limb exceeds a predetermined threshold safe level and thereby becomes sufficient to overcome the effect of the biasing force, the resilient biasing ~~mechanism~~ means allows the components automatically to move in said at least one bending or axial rotational articulation, thereby providing failsafe protection of the limb from excessive force applied to the limb, said resilient biasing means including

a clutch-like mechanism having opposing sets of co-operating clutch teeth wherein the teeth are substantially symmetrical in profile whereby the clutch-like mechanism may be disengaged in either rotational direction of torque, clock-wise or anti-clockwise, applied to the prosthetic limb and

a pin mounted to one of the proximal and distal components and co-operating with a socket of a corresponding concave shape in the other of the proximal and distal components, whereby a bending force applied to the prosthetic limb in use will cause the tip of the pin to ride outwardly up the socket wall in the direction controlled by the bending force.

28. (New) A failsafe apparatus for attaching a prosthetic limb to the bone of a patient, wherein a force may be applied to the limb urging the limb toward tilting and/or rotational articulation, the failsafe apparatus comprising:

a proximal component to mount to a bone implant ;

a distal component to mount to a prosthetic limb ;

a coupling body coupling the proximal and distal components moveably with respect to each other in a tilting and an axial rotational articulation, said coupling body including

a mechanism for holding said proximal and distal components in relation to each other so that the components can be engaged and can be disengaged, wherein when the components are engaged, one component is in a fixed relation to the other, preventing said tilting and axial rotation, and wherein when the components are disengaged, said tilting and/or axial rotation is allowed, said coupling body including

a resilient biasing means for applying a biasing force holding one of the components engaged with the other component for normal use of the prosthetic limb subject to an applied force less than a predetermined threshold safe level, the effect of said biasing force being opposed by any said force applied to the limb urging the limb toward said tilting and/or rotational articulation, and only when said force applied to the limb exceeds a said threshold safe level and thereby becomes sufficient to overcome the effect of the biasing force, the resilient biasing mechanism allows the components automatically to become disengaged and thereby to move in said tilting and/or axial rotational articulation, thereby providing failsafe protection of the limb from excessive force applied to the limb.